

**Amendments to the Claims:**

The listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) A superconducting wire rod filled with or interiorly including a first superconductor containing ~~a boron~~ magnesium diboride (MgB<sub>2</sub>), wherein a metal powder is added to a super-conducting material included in ~~said~~ the superconducting wire rod, ~~said the~~ metal powder is selected from at least one of ~~an~~ indium, a tin, and a lead, ~~an iron, a magnesium and an aluminum~~, ~~said the~~ metal power having an average grain diameter equal to or less than 20  $\mu\text{m}$  is 5 to 25 vol% dispersed in ~~said the~~ superconducting material, a density of the superconducting material included in the superconducting wire rod after a final work is equal to or more than 90% a theoretical density, and a critical current density is equal to or more than 1000 A/cm<sup>2</sup>.
2. (currently amended) A superconducting wire rod as claimed in claim 1, wherein a defect portion having an area equal to or more than 10 mm<sup>2</sup> does not exist over an entire length of the superconducting wire rod, on a surface of ~~said~~ the superconducting wire rod.
3. (currently amended) A superconducting wire rod as claimed in claim 1, having an allowable bending strain rate  $\epsilon$  of 0.8% or more, wherein  $\epsilon$  is defined as  $\epsilon = t/2r \times 100$ , wherein t is the entire thickness of the superconducting wire, and r is the radius of bending, and wherein the superconducting wire, when bent, is in the case that a bending strain rate capable of maintaining at least a

~~critical current density  $J_c(1)$  90% of the equal to or more than a critical current density  $J_c(0)$  at a time when no bending is applied to the wire rod is defined as an allowable bending strain rate, the allowable bending strain rate  $\epsilon$  (%) ( $\epsilon = (t/2r) \times 100$ ) is equal to or more than 0.8%, on the assumption that an entire thickness of said superconducting wire rod is set to  $t$ , a radius of bending is set to  $r$ , and a rate of bending strain is set to  $\epsilon$ .~~

4. (currently amended) A superconducting wire rod as claimed in claim 1, wherein ~~said the first~~ superconductor containing ~~the boron~~ magnesium diboride ( $MgB_2$ ) is ~~made complex compound~~ complexed with a different kind of second superconductor.

5. (currently amended) A superconducting wire rod as claimed in claim 4, wherein ~~said different kind of~~ the second superconductor is a niobium titanium superconductor.

6. (currently amended) A connection for connecting a first superconducting wire rod with a second superconducting rod ~~as claimed in claim 1~~, wherein the connection between the ~~superconducting wire rods mentioned above~~ is achieved by bring one end of the first rod in close proximity to one end of the second rod, and applying or coating the ends with  $MgB_2$  powder using a connecting method corresponding to a bonding via the superconductor containing the boron magnesium diboride.

7. (withdrawn) A method of producing a superconducting wire rod comprising:

a step of mixing a metal powder having an average grain diameter equal to or less than 20  $\mu m$  and selected from at least one of an indium, a tin, a

lead, an iron, a magnesium and an aluminum of 5 to 25 vol% to a superconducting powder containing a boron so as to produce a mixed powder;

a step of charging said mixed powder to a metal pipe; and

a step of wiring and/or rolling said metal pipe,

wherein a density of a superconducting material contained in the superconducting wire rod after a final process is equal to or more than 90%, and a critical current density is equal to or more than 1000 A/cm<sup>2</sup>.